



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/516,739

12/06/2004

Shoji Tokuda

427972000600

4562

25227

7590

12/07/2007

MORRISON & FOERSTER LLP

1650 TYSONS BOULEVARD

SUITE 400

MCLEAN, VA 22102

EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

12/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,739

Applicant(s)

TOKUDA ET AL.

Examiner

Lynda M. Salvatore

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's After Final remarks filed 11/19/07 have been fully considered and entered. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, upon further consideration, a new ground(s) of rejection is set forth herein below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4, 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088.

The patent issued to Bastioli et al., teach a biodegradable polyester mixture comprising 2-30% of a polymer of polylactic acid (abstract). Said polymer of polylactic acid comprises at least 75% L or D lactic acid or there combinations (column 7, claim 1). Said biodegradable polyester mixture is suitable to form fibers for the manufacture of non-woven fabrics (column 5, 50-60). Bastioli et al., does not specifically teach forming an electret filter medium, however, the patent issued to Knight et al., teach an electret treatment for non-woven webs (title and abstract).

Knight et al., teach employing a corona discharge method (abstract). Knight et al., specifically teach providing filtration materials (column 1, 15-25).

Therefore, motivated by the desire to provide a biodegradable electret filter medium, it would have been obvious to one having ordinary skill in the art at the time the invention was made to treat the non-woven fabric formed with the biodegradable polyester taught by Bastioli et al., with the corona discharge method taught by Knight et al.

The combination of prior art fails to teach the claimed endotherm, crystal fusion and charge density properties, however, it is reasonable to presume that said properties are inherent to the non-woven fabric provided by the combination of Bastioli et al., in view of Knight et al. Support for said presumption is found in the use of like materials such as L and D lactic acid polymers in the claimed amounts/ratios and the use of like processes such as forming a non-woven fabric, which would result in the claimed endotherm, crystal fusion and charge density properties.

4. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088 as applied to claims 1 and 7 and further in view of Raetzsuch et al., US 6,537,473.

The combination of Bastioli et al., in view of Knight et al., fail to teach adding nucleating agents to the poly-lactic acid polymer composition, however, it is commonly known in the art that nucleating agents are added to polymers to increase the crystallization rate and the overall percent crystallinity of the polymer (<http://www.specialchem4polymers.com/tc/nucleators/>). To that end, the patent issued to Raetzsuch et al., teach polymer filaments having .05 to 1% of a nucleating agent (column 5, 45-55).

Therefore, motivated by the desire to increase the crystallization rate and the overall percent crystallinity of the polymer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a sufficient amount of nucleating agent to the poly(DL-lactic) acid polymer of Bastioli et al., in view of Knight et al., as taught by Ractzsuch et al.

With regard to phrase “consisting essentially of”, the burden of establishing that any composition components of the prior art references applied by the Examiner is excluded from the claims as argues appropriately rests the Appellants. *In re Herz*, 190 USPQ 461 (1976) and *Ex parte Hoffman*, 12 USPQ 2d 1061 (1989). Applicant bares the burden of proof in establishing that non-recited components materially change the characteristics of Applicant’s invention *In re DeLajarte* 143 USPQ 256

5. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088 as applied to claims 1 and 7 in view of Angadjivand et al., US 6,375,886.

The combination of prior art fails to teach the specific process limitations set forth, however, the patent issued to Angadjivand et al., teach making a non-woven electret web by cooling the web in the presence of an electric field (column 13, 30-45). Angadjivand et al., teach that such cooling traps the charge (column 13, 30-45). Suitable electric fields include the claimed corona current (column 10, 1-10).

Therefore, motivated by the desire to form an electret non-woven with trapped charge, it would have been obvious to one having ordinary skill in the art to treat the non-woven web

provided by the combination of Bastioli et al., in view of Knight et al., with the electric charge methods taught by Angadjivand et al.

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088 as applied to claims 1 and 7 and further in view of Gruber et al., US 5,142,023.

The combination of prior art does not teach the claimed purifying steps, however, the patent issued to Gruber et al., teach purifying lactide polymers with distillation (title and column 14, 50-60). Specifically, Gruber et al., teach employing vapor distillation to remove low molecular weight oligomers which may be present (column 6, 5-26). Gruber et al., further teach that an object of the invention is to provide biodegradable lactide polymers.

Therefore, motivated by the desire to remove the impurities within the lactide polymer to produce a biodegradable polymer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to distill the lactide polymers of Bastioli et al., in view of Knight et al., as taught by Gruber et al.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M. Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 5th, 2007
/Lynda Salvatore/
Primary Examiner
Art Unit 1794